



## TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.  
ITS.0008US

In Reply To Application Of: Nagesh K. Vodrahalli

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/751,309	December 31, 2003	Michael J. Stahl	21906	2874	8796

Invention: Multiplexing and Demultiplexing Optical Signals

COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on  
**Setpember 27, 2006**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Nagesh K. Vodrahalli, et al.

§ Art Unit: 2874

Serial No.: 10/751,309

§ Examiner: Michael J. Stahl

Filed: December 31, 2006

§ Atty Docket: ITS.0008US  
(P17998)

For: Multiplexing and Demultiplexing  
Optical Signals

§ Assignee: Intel Corporation

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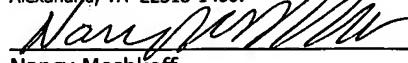
**APPEAL BRIEF**

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## **REAL PARTY IN INTEREST**

The real party in interest is the assignee Intel Corporation.

**RELATED APPEALS AND INTERFERENCES**

None.

## **STATUS OF CLAIMS**

Claims 1-4 (Rejected).

Claim 5 (Canceled).

Claims 6-15 (Rejected).

Claims 16-17 (Canceled).

Claims 18-20 (Rejected).

Claims 21-25 (Canceled).

Claims 1-4, 6-15, and 18-20 are rejected and claims 1-2, 6-7, and 11-13 are the subject of this Appeal Brief.

## **STATUS OF AMENDMENTS**

The amendments filed in a Reply to Final Rejection on August 14, 2006 have not been entered.

## SUMMARY OF CLAIMED SUBJECT MATTER

In the following discussion, the independent claims are read on one of many possible embodiments without limiting the claims:

1. A method comprising:

demultiplexing at least one wavelength from a multiplexed optical signal (Figure 1, 24, specification at page 2, lines 15-23); and  
detecting said demultiplexed wavelength using an L-shaped detector (Figures 1 and 3, 26, specification at page 4, lines 1-8).

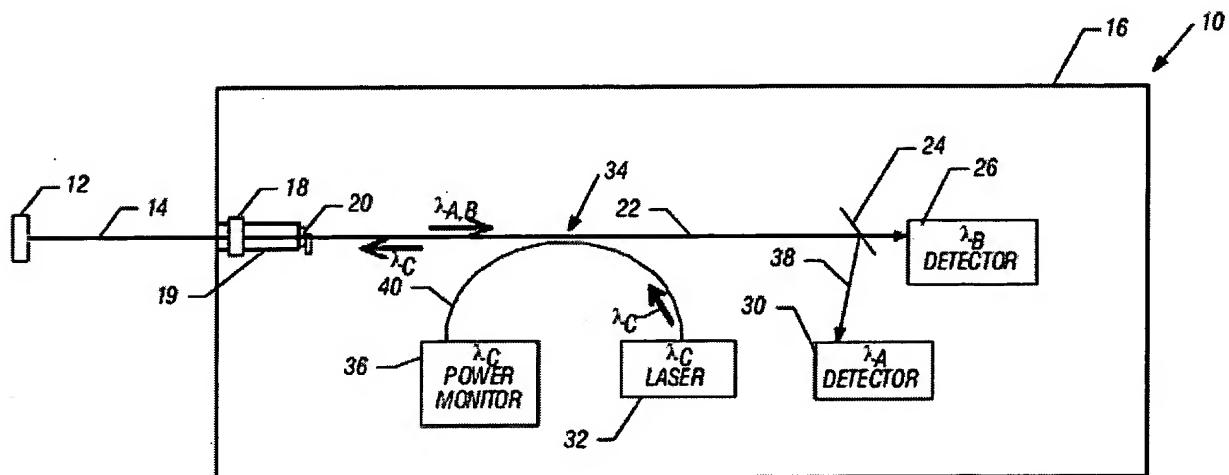
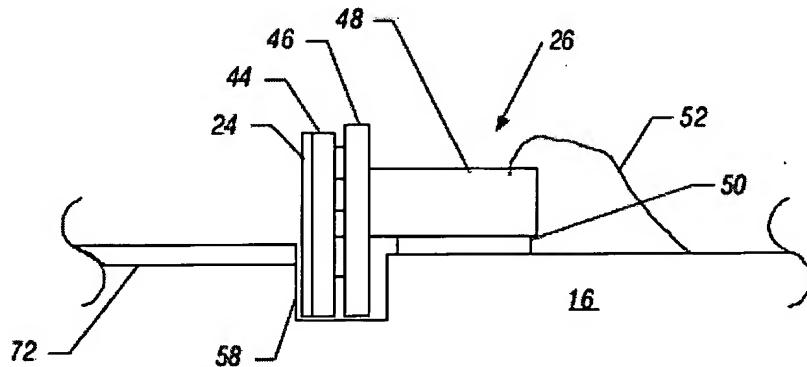


FIG. 1

12. An optical system comprising:  
a waveguide (Figure 1, 22, specification at page 2, lines 15-17); and  
a demultiplexer (Figure 1, 24, 26, 30) coupled to said waveguide to demultiplex at least one wavelength from a multiplexed optical signal on said waveguide, said demultiplexer including a photodetector to detect said wavelength wherein said demultiplexer includes an integrated reflector (Figure 3, 24) and an L-shaped photodetector (Figure 3, 26), said photodetector to detect a wavelength passed by said reflector (specification at page 4, lines 1-23).



**FIG. 3**

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At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

**GROUNDΣ OF REJECTION TO BE REVIEWED ON APPEAL**

- A. **Whether claims 1, 6-7, and 11 are anticipated under 35 U.S.C. § 102(b) by Fan (U.S. Patent No. 6,495,813).**
- B. **Whether claims 1-2 and 12-13 are anticipated under 35 U.S.C. § 102(e) by Takagi (U.S. Patent No. 6,979,136).**

## **ARGUMENT**

### **A. Are claims 1, 6-7, and 11 anticipated under 35 U.S.C. § 102(b) by Fan (U.S. Patent No. 6,495,813)?**

The rejection based on Fan was subject to pre-appeal review. Despite the fact that the panel recommended reopening prosecution, the same rejection was maintained.

Claim 1 calls for demultiplexing and detecting a demultiplexer wavelength using an L-shaped detector. The claim is rejected as anticipated by Fan.

Fan has nothing to do with multiplexed optical signals and nothing to do with detecting demultiplexed wavelengths. Fan is a photodetector for a camera.

Certainly, there is no multiplexed optical signal in Fan. To suggest otherwise would be to claim that light in the air that might be imaged by the camera is a multiplexed optical signal. There is no basis for such a position and reconsideration would be appropriate.

The argument that a camera uses a multiplexed signal relies on a construction of “multiplexed” that defies conventional usage of those skilled in the art. It simply reads “multiplexed” to cover anything and, therefore, is impermissible. It is respectfully submitted that this is a reason why the panel previously reopened prosecution.

### **C. Are claims 1-2 and 12-13 anticipated under 35 U.S.C. § 102(e) by Takagi (U.S. Patent No. 6,979,136)?**

#### **Claims 1 and 2**

The Office action contends that the demultiplexing is apparently done by the filter 5 which sends a wavelength  $\lambda_A$  to the light reception means 13 which includes a fiber holding means 57, a lens 58, and a photo diode 2. See column 2, line 6. The photo diode 2 is shown in Figures 20A and 20B. It is plainly rectangular and cannot fairly be said to be L-shaped. The assertion of it being L-shaped is made by improperly including the circuit board 63 (*see* column 6, line 2) as part of the photo diode 2. This is inconsistent not only with normal usage but also inconsistent with the usage in the cited reference, which refers to the photo diode as element 2. The circuit board 63 is not part of the detector which is the element 2 and merely mounts the

element 2, the lens 58, and the fiber holding means 57 as well as the circuit section which apparently does some operation which is not explained in any detail. In other words, there is no basis to here take the circuit board as part of the detector and therefore the rejection should be reversed.

Claims 12 and 13

The rejection of claim 12 as anticipated by Takagi relied on an improper construction of "integrated". Like the definition of "multiplexed," it simply reads out the word "integrated" since, under the Examiner's construction of "integrated", despite language to the contrary in the examiner's cited definition ("whole, united; undivided" or "uniting in one system several constituents previously regarded as separate"), everything in the world is integrated. See Final Rejection mailed July 27, 2006 at page 5, lines 1-4.

Moreover, the Office has already admitted that Takagi did not teach the reflector passing a wavelength to be detected. *See* Office Action mailed March 30, 2006 at page 5, lines 9-11.

The simple fact of the matter is that Takagi shows nothing whatsoever of interest.

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,



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## CLAIMS APPENDIX

The claims on appeal are:

1. A method comprising:  
demultiplexing at least one wavelength from a multiplexed optical signal; and  
detecting said demultiplexed wavelength using an L-shaped detector.
2. The method of claim 1 including providing an angled reflector in the path of said multiplexed signal to reflect light of a first wavelength to a first detector and to pass light of a second wavelength.
6. The method of claim 1 including forming said detector on an electrooptical bench.
7. The method of claim 6 including providing a trench in said bench to receive a portion of said L-shaped detector.
11. The method of claim 7 including forming electrical connections from said bench to one portion of said L-shaped detector.
12. An optical system comprising:  
a waveguide; and  
a demultiplexer coupled to said waveguide to demultiplex at least one wavelength from a multiplexed optical signal on said waveguide, said demultiplexer including a photodetector to detect said wavelength wherein said demultiplexer includes an integrated reflector and an L-shaped photodetector, said photodetector to detect a wavelength passed by said reflector.
13. The system of claim 12 wherein said demultiplexer includes an angled reflector to reflect light of a first wavelength to a first detector and to pass light of a second wavelength.

## **EVIDENCE APPENDIX**

None.

## **RELATED PROCEEDINGS APPENDIX**

None.